

Marine Region Program Descriptions and Key Measurable (Planned) Objectives

Program: Marine Resource Assessment

The Marine Resource Assessment Program (MRAP) gathers and disseminates fundamental information on key marine species and associated habitats, and the fisheries dependent on them. Information developed by the MRAP is provided to Department managers, Marine Region fishery management units, and other state and federal agencies to support fishery management decision making. The MRAP further supports fishery management efforts by:

- Developing, maintaining, and sharing marine resource data bases;
- Providing bio-statistical and socio-economic valuation services;
- Maintaining and providing research vessels;
- Developing and testing fishery resource assessment tools and methods; and
- Coordinating dive safety training and certification services to the Department as a whole.

The MRAP is made up of seven projects and many subprojects. The first four projects described below are ongoing (existing) projects that received little if any new funding or positions in 2006-07. Projects 5 through 7 are projects that are new projects or substantially enhanced based on new funding provided in FY 2006-07.

Project Descriptions:

Project 1: Recreational Fishing Data

Provides support to Recreational Fisheries Information Network (RecFIN) through participation on tri-state committees to determine best methods of gathering, analyzing, and presenting recreational fishery data; supports California Recreational Fisheries Survey (CRFS) through coordinating and collection of data in the field, and statistical review and analyses of methodologies; maintains quality Commercial Passenger Fishing Vessel (CPFV) database and provides data for Department and constituent use; and provides reports as required to support the Department and the Commission regulatory activities related to recreational fishing.

- RecFIN is a cooperative program with the National Marine Fisheries Service (NMFS), Pacific States Marine Fisheries Commission (PSMFC), and the states of Washington, Oregon, and California to gather coordinated information on state

and federal recreational fishing surveys and provides the data to biologists, managers, and the public.

- CRFS is a survey to estimate total fishing effort and catch for marine recreational anglers in California.
- CPFV vessels are commercially registered to take paying passengers on fishing trips. Operators are required to submit a fishing activity log to the Department for each fishing trip.

Budgeted Resources Dedicated to the Project: This project includes six permanent positions, one permanent Intermittent position and a Personal Services budget of \$536,146.

Key Measurable (Planned) Objectives for FY 2006-07: The following are the primary foci and associated planned objectives for 2006-07.

Focus 1: Recreational Fisheries Information Network (RecFIN) Program Support and Collaboration

- Coordinate the Department's work on RecFIN programs.
- Represent California on the RecFIN Technical Committee to set standards for the recreational data on the RecFIN web site to ensure the best science is used and to ensure that the California, Oregon, and Washington data are comparable.
- Represent California on the RecFIN Statistical Subcommittee to analyze and determine best methodologies for catch and effort estimates for the recreational fisheries of California, Oregon, and Washington to assist the Technical Committee.
- Represent California on the RecFIN Data Subcommittee to assist the Technical Committee with data input, retention and output standards for marine recreational survey sample and estimate data.

Focus 2: California Recreational Fisheries Survey (CRFS) Support:

- Coordinate the review of the CRFS to ensure that CRFS data and estimates address management needs and conform to the best available science, and document findings. The review will examine each part of the CRFS: sample design, survey methods, statistical methods, estimation procedures, computer programs, and data and documentation needs.
- Provide field sampling support and documentation of sampling process—2006-07, expect approximately 15,000 anglers to be contacted and 24,000 fish to be observed through the Department lead person's Del Norte and Wine district samplers and San Diego Biologist.
- Provide statistical review of CRFS computer programs to determine accuracy of logic and calculations for total recreational catch.

- Provide statistical analysis of dual frame collection methods to compare methodologies and determine statistical validity.
- Analysis to determine sampling bias and provide recommendations for sampling methodologies to eliminate.
- Develop program to increase sport fishing license point-of-sale angler contact information for use in telephone survey.

Focus 3: Commercial Passenger Fishing Vessel (CPFV) Logbook Database

- Edit historical and current CPFV log data for accuracy.
- Provide Department programs with CPFV log data for state and federal regulation development, publications, and fishery management plan development and provide constituents with data for research.

Focus 4: Environmental Documents - Triennial Ocean Sport Fishing Regulations Changes for 2007 through 2009

- Coordinate and produce updated supplemental program and species fishery data for the Commission sportfishing regulation change cycle.

Focus 5: Scientific Reports

- Provide fishery-based reports to California Cooperative of Fisheries Investigation (CalCOFI), Status of the Fisheries Reports, and scientific journals.

Focus 6: Training Needs

- Sampling and Field Survey Design
- Technical Report Writing

Key Measurable (Planned) Objectives for FY 2007-08: The following are the primary foci and associated planned objectives for 2007-08.

Focus 1: Recreational Fisheries Information Network (RecFIN) Program Support and Collaboration

- Coordinate the Department's work on RecFIN programs.
- Represent California on the RecFIN Technical Committee to set standards for the recreational data on the RecFIN web site to ensure the best science is used and to ensure that the California, Oregon, and Washington data are comparable.
- Represent California on the Statistical Subcommittee to analyze and determine best methodologies to collect recreational fishery data in California, Oregon, and Washington.

- Represent California on the Data Subcommittee to draft a simplified query system, outline a data-user manual, and add any available documentation to the web site.

Focus 2: California Recreational Fisheries Survey (CRFS) Support

- Coordinate the implementation the changes and improvements identified during the review of CRFS in FY 2006-07; coordinate validation studies to determine accuracy and bias of methods including coordination of pilot studies to test alternative methods. Results to be available December 31, 2007.
- Provide field sampling support.
- Provide field sampling opportunities for statistical staff to achieve understanding of how field sampling is conducted and how it relates to data collected.
- Initiate outreach by mail and by field contact with license agents to increase number of contact information for use in fishing effort telephone survey.

Focus 3: Commercial Passenger Fishing Vessel (CPFV) Logbook Database

- Edit historical and current CPFV data for accuracy.
- Provide Department of Fish and Game programs with CPFV data for state and federal regulation development, publications, and fishery management plan development and provide constituents with data for research.
- Initiate field contact with CPFV owners and operators to increase compliance and accuracy of logs required to be sent to Department.

Focus 4: Groundfish Hooking and Mortality Study

- Conduct field work to determine mortality of recreationally-caught groundfish species when hooked and discarded.

Project 2: Marine Fisheries Statistical Unit

The primary goal of the Marine Fisheries Statistical Unit (Unit) is to collect, audit, and process commercial fishery statistics legally required and provided to the Department.

Budgeted Resources Dedicated to the Project: This project includes 10 permanent positions and a Personal Services budget of \$516,030.

Key Measurable (Planned) Objectives for FY 2006-07: The following are the primary foci and associated planned objectives for 2006-07.

Focus 1: Create and maintain commercial Landing Receipt and Commercial Passenger Fishing Vessel (CPFV) database

- Receive, process, and input all landing receipt and CPFV logbook data. Data is manually entered through the Commercial Fisheries Information System (CFIS). Reports are generated and worked by Unit staff to check for data entry and/or licensing errors. The data is placed in a “suspense file” while it is being worked.
- Data is corrected or “edited” by Department Biologists, and PSMFC Technicians, as needed. Corrected data is inserted into the master database files.
- Compliance letters are generated by Unit staff and sent to Fish Businesses who have not complied with Fish and Game Code §8043 in the submittal of their landing data. Staff works closely with the Department Enforcement Division on landing receipt compliance issues. Referrals are made to Enforcement when erroneous data are provided, and follow-up is monitored.

Focus 2: Landing Receipt Books

- Design and print all landing receipt books (and several logbooks). Once printed, the Unit is responsible for the inventory and distribution of all landing receipt books to licensed Fish Businesses, and Department license offices. Related to this task is printing and distribution of postage-paid envelopes for landing receipts and logbook return.

Focus 3: Lobster Log database

- Receive, process, and input all Lobster logbook data received. Data is via the California Fisheries Information System (CFIS). Complete lobster season’s data is sent to the Senior Invertebrate Specialist, with associated lobster logs.

Focus 4: Transportation Receipt database

- Receive, process, and input all Transportation Receipts received, by calendar year. Data is entered into the Transportation Receipt module of the CFIS database.
- Reports are generated and worked by Unit staff to verify data received. Transportation Receipt data is available to the Department Enforcement Division and other enforcement agencies requesting data for compliance issues.

Focus 5: California Commercial Landings for 2006

- This annual report is generated twice a year – in a preliminary and final format. The Unit staff does a series of data quality checks on the data that make up this report. The preliminary data are sent to Department Biologists for review. Biologists review the data and send data corrections to the Unit. After all corrections are received, researched, and input, the final version of this report is produced and distributed. Annual distribution is sent to Department staff, National Oceanic and Atmospheric Administration (NOAA) – National Marine Fisheries Service (NMFS) staff, and depository libraries throughout California.

Focus 6: Reports of landing activity and summarized landing data

- Generate reports of landing activity for DFG Enforcement staff, NMFS Special Agents, other enforcement agencies, courts, environmental firms, private consultants, and the public.
- Consult with the Department's Office of the General Counsel on confidentiality issues in regard to data release and summarization of landing effort.

Focus 7: Update Landing Receipt User's Guide

- Update User's Guide and do a mass mailing to all Fish Businesses in January 2007.

Focus 8: Landings Data Processing System Review

- Form and lead a workgroup representing internal and external marine fisheries statistics stakeholders in early 2007 to review the landings and logbook data processing system and, if appropriate, develop recommendations for system change.
- By July 2007 convey workgroup recommendations to Department managers for review and possible approval.

Key Measurable (Planned) Objectives for FY 2007-08: For Project 2 (Marine Fisheries Statistical Unit) Foci 1 through 7 represents ongoing Department activities and obligations that do not change substantially from year to year. For Focus 8, during 2007-08 the project would begin implementation of the landings data processing system recommendations made by the 2006-07 workgroup and approved by management.

Sub-Project 2a: Socio-economic Valuation (Marine Region Economist)

This project provides economic analyses of California's marine resources, including both descriptive characteristics and impact projections from an economics perspective. This is in support of the State's required regulatory analyses and documentation of proposed legislation, Department management proposals and marine fisheries plans, and documentation for conformation with Federal regulations for species found in State waters. The project (position) performs other ad hoc economic analyses and documentation as needed, for: disaster declarations, Congressional analyses for State's fisheries, and as requested by the Governor's Office, the Fish and Game Commission, the Department of Finance, or the Legislative Analyst's Office.

Budgeted Resources Dedicated to the Project: This project includes one permanent position and a Personal Services budget of \$89,370 which is already included in the total Personal Services budget for Project 2.

Sub-Project 2a - Key Measurable (Planned) Objectives for FY 2006-07:

- California regulatory process, proposed rulemaking economic and fiscal impact analyses and documentation (ongoing)
- Department fiscal impact assessments (ongoing)
- Salmon disaster declaration and assistance program economic analyses (ongoing)
- Federal regulation conformation economic analyses (ongoing)
- Fisheries plans and proposals economic analyses (ongoing)
- MLMA (California's Marine Life Management Act) research on essential fishery information - socioeconomic (Request For Proposals / Invitation For Bid)

Sub-Project 2a - Key Measurable (Planned) Objectives for FY 2007-08:

- California regulatory process, proposed rulemaking economic and fiscal impact analyses and documentation (ongoing)
- Department fiscal impact assessments (ongoing)
- Federal regulation conformation economic analyses (ongoing)
- Fisheries plans and proposals economic analyses (ongoing)
- Attend IMPLAN (Impact Analysis for PLANning) introductory training course (incurs out-of-state travel)

Project 3: Fisheries Independent Resource Assessment - Remote Operated Vehicles (ROV)

MRAP Project 3 has a number of components. The core project, **remote operated vehicle (ROV) surveys**, is currently focused on providing assessments of finfish off

the recently created Marine Protected Areas (MPAs) off the northern Channel Islands in conjunction with the Marine Life Protection Act (MLPA). The project also has a number of independently staffed subprojects **including abalone and related sea urchin assessments** linked to the recently adopted Abalone Recovery and Management Plan (ARMP); a **kelp forest monitoring** Biologist, and support for the **California Cooperative of Oceanic Fisheries Investigations** (CalCOFI).

- **ROV:** The Project's ROV team is developing an important monitoring tool to help assess the effectiveness of MPAs. Project development and sustainability has been complemented by a long-term partnership with Marine Applied Research and Exploration (MARE), The Nature Conservancy, the Ocean Protection Council (OPC), NOAA, and other partners that share Department goals and costs. While currently focused on MPAs and associated finfish and essential habitat, the continued success of ROV-based quantitative methods will provide the basis for developing cost effective sustainable assessments throughout California. This program also provides a model for partnerships and sustainable assessments statewide.
- **Abalone¹, kelp, and artificial reef sub-projects:** Additional areas of focus in our project includes work on abalone assessments mandated by implementation of the Abalone Recovery and Management Plan (ARMP) and one staff member focused on yearly kelp forest and artificial reef based assessments and monitoring. Abalone work under the ARMP has two major components; assessments of recovery in the south and the northern managed fishery. Project staff is assisting the invertebrate management project in primarily SCUBA based assessments of the northern red abalone sport fishery.
- **CalCOFI sub-project:** One of our project staff is involved half-time as one of two Department liaisons to the CalCOFI program. CalCOFI was established in 1949 as a group of scientists & technicians at Scripps Institution of Oceanography (SIO), the National Marine Fisheries Service (NMFS), and the Department to conduct quarterly cruises off California, hold an annual conference, and produce an annual publication. The long time series of measured larval production and physical oceanography maintained by the CalCOFI program provides a foundation for scientists to measure changes in larval recruitment as the climate changes over time.

Budgeted Resources Dedicated to the Project: This project includes seven permanent positions and a Personal Services budget of \$530,015.

¹ Given the likelihood that the ROV project may expand to a state-wide scope and that this sub-project is mostly SCUBA based, it may be shifted to the Fishery Independent SCUBA assessment project.

Key Measurable (Planned) Objectives for FY 2006-07:

ROV project: The ROV team will continue a time series of northern Channel Island MPAs finfish abundance initiated in 2004. In addition, they will join with MARE to further develop methods as part of ongoing research. This program assesses the effectiveness of MPAs and provides this data to managers, partners, and others as to assess the effectiveness of MPAs. Products used for management will be part of the Department's geo-data base, web page, and published journals.

- Continue randomly sampling and post processing fish abundances and habitat and abundances at ten sites on and adjacent to five northern Channel Island MPAs.
 - Integrate 2005 and 2006 MPA survey data into Department's geo-data base for MPA surveys during this and next fiscal year.
 - Write a cruise report.
 - Provide assessment ready data for our partners on the Department's web-page and in a published final report.
- Write operations training manuals in preparation for training new staff in an expanded program.
- Train new post processing staff
- Publish ROV protocols in the Marine Technical Science Journal, fall issue.
 - Present results orally at California World Oceans Conference in August and CalCOFI conference in December.
- Provide our protocols to NOAA and academic partners interested in emulating our work.
- Submit a paper for peer review on sampling design that will allow managers to determine what sampling levels are optimal to manage finfish and at what cost for future surveys.
- Improve precision of quantitative tracking protocols as part of an experiment completed in September of 2006.
- Improve methods to size fish enumerated during ROV surveys to further perfect quantitative protocols.
- Developing and testing new and redundant ROV equipment to ensure sustainable surveys in future years.
 - Design entire system upgrade for 2007-08 upgrade of existing and a new ROV to enhanced standards using Department and OPC grant funds.
 - Upgrade two new enforcement catamarans as added survey platforms for joint ROV assessments and enforcement operations.
- Hire and train 3.5 positions of scientific aid staff for post processing as replacements for permanent staff redirected to other projects in 2005-06.
- Initiate development of post processing lab.

Abalone assessments: Resource assessments of abalone and sea urchins are conducted annually using SCUBA at key sites along the coast in northern California. Eight sites are currently mandated in the ARMP to be surveyed on a tri-annual basis. These surveys are conducted using Department and contract divers from universities. Divers are used to assess the density of animals at heavily fished and lightly fished sites in the heart of the recreational red abalone fishery in northern California. The recreational fishery is managed with multiple measures including no SCUBA, size limits, season closures as well as yearly and daily bag limits. This fishery has approximately 35,000 participants that take an estimated 260,000 red abalone per year².

- Complete first cycle of tri-annual resource assessments of abalone and sea urchins at eight key Index stations in Sonoma and Mendocino Counties. One site remains to be surveyed in 2006-07 to complete the first three year series.
- Conduct quarterly gonad index assessments to monitor the reproduction of red abalone in northern California.
- Conduct annual recruitment surveys by assessing the young-of-the-year inside recruitment modules (artificial reefs).
- Conduct red abalone tagging study off Van Damme State Park to determine movement in and out of fished depths.
- One new hire (Scientific Aide) has been used to assist with the underwater resource assessments as well as data entry of the results of these assessments.
- Contract will need to be let for the ongoing site based abalone abundance surveys.

Kelp Survey and artificial reefs:

This sub-project staff member will conduct a coast wide aerial kelp survey during the fiscal year to quantify the California kelp canopy as part of an ongoing time series. The survey will be utilized to provide information to assist selecting sites for new marine reserves and to evaluate the effectiveness of existing reserves. In addition, the Biologist will monitor the construction of an artificial reef in Ventura County utilizing Coastal Commission mitigation funds. The reef is intended to provide habitat for kelp and sport fish enhancement.

- Conduct aerial photo survey
- Digitize results
- Add to time series of kelp survey on Departments web page.
- Work with Department geo-database for archival storage of results.

² Two fishery dependent assessments required under the ARMP are currently unassigned pending the Marine Region restructuring. These include an ongoing time series of creel survey (dating back to 1975) and a punch-card and telephone survey. Until this year, one of the abalone staff biologists directed this work.

The CalCOFI subproject:

The Marine Region will host the CalCOFI Conference Symposium and publish the journal CalCOFI Reports. The conference will be held December 4 through 6, 2006. The journal volume from this conference will be published by December 2007.

- Participate in quarterly sampling cruises.
- Produce CalCOFI Reports publication and fishery reviews.
- Participate in annual CalCOFI conference.
- Conduct quarterly CalCOFI business meetings.
- Every third year (2006), plan and host the symposium of the CalCOFI Conference.
- Plan and host the symposium of the conference.
- Coordinate with the venue for the conference.

Key Measurable (Planned) Objectives for FY 2007-08:

ROV based assessments:

The ROV team will continue the time series of northern Channel Island MPA assessments initiated in 2004. The program will expand to include invertebrate monitoring to further develop the ROV as an important tool for assessment. The project will be prepared to continue ongoing assessments while producing a critical self evaluation of a three year time series off the northern Channel Island MPAs. If as anticipated, the Department and MARE are successful in providing redundant ROV equipment, the project will expand to invertebrate assessments. Staffing will be provided by further linkages to other products including the Invertebrate Management Project.

- Continue sampling and post processing fish habitat and abundances and off ten sites on and adjacent to five northern channel Island MPAs.
 - Ongoing Integration of the 2007 MPA survey in the geo-data base with DFG data program staff.
 - Write a cruise report.
 - Publish 2007 data on web-page and in 2007 final report
- Initiate preparation of a published report summarizing a three year time series of surveys at ten sites to evaluate the program effectiveness. This is in anticipation of the Commission 2008 northern Channel Island MPA evaluation.
- Train staff from other projects as part of expanded ROV assessments if and when redundant equipment with MARE is procured (e.g. abalone, sea urchin, sea cucumbers, squid, etc.)
- Publish peer reviewed paper on sampling design that will allow managers to determine what sampling levels are needed and what it will cost for future surveys.

- Publish paper on precision of quantitative tracking protocols to determine habitat relief initiated in 2006.
- Incorporate new sizing protocols as part of ROV survey...
- Procure redundant improved ROV system with MARE,
 - Design upgrade of entire system for 2007/08 upgrade of entire system to new standards using Department and Ocean Protection Council Grant.
- Continue hiring and training of post processing staff (3.5 positions of scientific aid staff). Establish a permanent post processing lab near a state university.

Abalone assessments³:

ARMP mandated assessments at key index sites will continue in conjunctions with the mandated tri-annual northern red abalone fisheries status report to the Fish and Game Commission summarizing the eight surveyed sites. An alternate strategy may be to initiate a long term monitoring program as outlined in the ARMP. Such sampling would require a shift to a more random stratified design that would be cost effective if linked to other SCUBA based assessments and partners such as Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) in concert with our Fishery Independent SCUBA assessment Project.

- Conduct resource assessments of abalone, and sea urchins at three of the eight key Index stations in Sonoma and Mendocino Counties.
- Produce tri-annual status of northern fishery report summarizing results of index site surveys as required by the Fish and Game Commission.
- Prepare draft publication for peer reviewed publication on yearly fecundity changes in abalone off northern California using the existing three year time series and previous gonad index work.
- If these results warrant and staffing becomes available, continue quarterly gonad index collections.
- Recapture tagged abalone at Van Damme State Park from study of movement in and outside of free diver depth refuge.
 - Prepare a report on movement based on mark and recapture locations.
 - If results are promising, tag an equal subset of the population for a continued movement study.
- Conduct annual recruitment surveys to assess the young-of-the-year inside recruitment modules (artificial reefs).
- Assess abalone meat weight differences in different seasons to determine changes during the fishery from April thru November (excluding July).
- Compile assessment information for non-fished abalone resources in northern California.

³ Given the likelihood that the ROV project may expand to a state-wide scope and that these studies are mostly SCUBA based, this project should be moved under Fishery Independent SCUBA assessment project.

- Diver staff from throughout the Department will be asked to participate in assessments.

Remote sampling⁴ and artificial reefs sub-project:

The kelp survey sub-project should be expanded to include reviewing other ongoing remote sampling such as satellite based kelp assessment, nearshore aerial habitat mapping using radar (LIDAR) and sub-sea sonar mapping. Such remote sampling is a major component used by the Department and others in the MPA planning process. Producing sub-sea sonar maps are a critical pre-requisite to effective ROV and SCUBA based assessments. The Department needs to take an active role in monitoring and directing these activities as a direct linkage to our other assessments.

- Contract out kelp flight surveys.
- Generate an annual summary report of existing and planned mapping with input from the various Department Projects involved in assessment and management.
 - Identify assessment gaps and potential partners to provide mapping.
- Initiate an archival GIS based data base with web-linkages to source maps
- Work with Data Management and Coordination project to establish a library of source mapping for various projects.
- Initiate contract for needed sonar or remote mapping.
 - Identify potential partners for in-kind support (e.g. vessel time and or funding).
 - Manage contract.

The CalCOFI subproject involvements:

CalCOFI is going to be working with the state more in 2007-08 to look at larvae of species of concern to both the federal and state fisheries management agencies.

- Participate in quarterly sampling cruises
- Participate in sorting of samples.
- Produce larval abundance reports for fishery management
- Produce CalCOFI Reports publication and fishery reviews
- Participate in annual CalCOFI Conference
- Conduct quarterly CalCOFI business meetings

⁴ This change will require an added 0.5 PY of GIS support and 1 PY of temp help support in addition to contract funds for kelp and habitat survey.

Project 4: Data Base Management

This project consists of a group of data base and GIS specialists that develop, maintain, and sometimes analyze fishery and habitat data bases for the MRAP and Marine Region management units. The project inventories historical and current data bases and ensures they are in usable, up-to-date form.

Budgeted Resources Dedicated to the Project: This project includes four permanent positions and a Personal Services budget of \$291,949, which is already included in the Personal Services budget for the Marine Region Management Program.

Key Measurable (Planned) Objectives for FY 2006-07:

- Prior to July 2007, conduct a complete inventory of historical, current, and anticipated fish, invertebrate, and habitat data bases, including any necessary updates in format or software to ensure maximum utility and availability.
- Prior to July 2007, cooperate with the Bio-geographic Data Branch (BDB) in developing protocols for ensuring that Marine Region data is maintained in a form that complies with the standards of the Branch.
- Prior to July 2007, in cooperation with other MRAP units, develop a plan for facilitating peer review and publication of Marine Region research and monitoring results, including facilitating the re-establishment of the "Fishery Bulletin" and Administrative Report series. In connection with this publication facilitation effort, re-establish the relationship between Marine Region and the Moss Landing Marine Lab for housing and locating historical, current, and future Marine Region publications.
- Centralized commercial and recreational database depository; quality control; and distribution; evaluate appropriate commercial fishery-dependent data collection currently collected and plan for future needs including electronic formats.
- Coordination with Pacific Coast Ocean Observing System (PaCOOS) proposal to develop and maintain comprehensive ocean databases; collaboration with NOAA's Southwest Fisheries Science Center (SWFSC) and the Department'; integrated data management system to allow access and ecosystem-based analysis.

Key Measurable (Planned) Objectives for FY 2007-08:

- Work with Marine Protected Area (MPA) staff to develop the GIS data layers necessary to develop and evaluate the next network of MPAs under the Marine Life Protection Act (MLPA) for consideration by the Commission.
- On a priority basis begin updating all historical and current Marine Region biological and habitat data bases to ensure their compliance with BDB standards. Complete the updating process by July 2008.

Project 5: Research Vessel Operations

The Marine Region has several research vessels, ranging from skiffs to an 85-foot trawler. Research Vessel Operations staff maintains these vessels, prepares them for field activities in cooperation with Biologists, schedules their use, and (in the case of larger vessels) operates them. Senior operators are also trained in the operations of large Enforcement Branch marine vessels for both research and enforcement purposes. The Marine Region's research vessels are often operated in support of research activities by universities and other agencies.

Budgeted Resources Dedicated to the Project: This project includes five permanent positions and a Personal Services budget of \$285,591.

Key Measurable (Planned) Objectives for FY 2006-07:

- Operate vessels during scheduled cruises throughout the year, but primarily during the late spring through fall period.
- In the 2006-07 off season perform necessary maintenance and repairs on Marine Region vessels to ensure their availability during the 2007 off-season.
- By April 1, 2007 prepare a complete inventory of all Marine Region vessels, including an assessment of their conditions and any repairs/improvements needed to make them "turn-key" ready for the 2008 field season. In conjunction with this inventory, develop (in cooperation with fishery management and other resource assessment projects) recommendations for fleet additions and deletions. Also in connection with this inventory develop a specific recommended plan for ensuring the ongoing maintenance of desired vessels in "turn-key" condition.
- By February 2007, develop a specific proposal for a formal use and cost sharing arrangement between the Marine Region and the Enforcement Division with respect to the large Enforcement catamarans.
- During the 2006-07 off season make a concerted effort to identify internal or external needs for the services of the Department owned research vehicle Mako (R/V Mako). Simultaneously, explore options for divesting the Marine Region of the vessel if productive internal or external uses can not be identified.

Key Measurable (Planned) Objectives for FY 2007-08:

- Operate vessels during scheduled cruises throughout the year, but primarily during the late spring through fall period.
- In the 2007-08 off-season perform necessary maintenance and repairs on Marine Region vessels to ensure their availability during the 2007 off-season
- Perform approved maintenance/repairs/improvements to Marine region vessels as identified in the 2006-07 inventory to have the vessels in turn-key condition for the 2008 field season.

- Depending on the outcome of the 2006-07 assessment of R/V Mako uses and marketability, either prepare the vessel for divestment or use during the 2007-2008 off season.

Project 6: Fishery Independent (SCUBA) Assessment

Using primarily SCUBA-based methods, the staff of this project conducts surveys of fish and invertebrates in nearshore sub-tidal habitats, coast-wide. In some cases this is for purely stock assessment and monitoring purposes, while in other cases it is to evaluate specific management measures. Often this project works in partnership with other agencies and academic institutions to accomplish large-scale, collaborative research and monitoring efforts.

Budgeted Resources Dedicated to the Project: This project includes seven permanent positions and a Personal Services budget of \$544,824.

Key Measurable (Planned) Objectives for FY 2006-07:

- Marine Region management units are currently in the process of prioritizing species for assessment needs. In cooperation with these units by July 2007 develop formal recommended monitoring approaches for high priority species. Obtain independent peer review of proposals. In conjunction with developing monitoring approaches, develop an inventory of all significant ongoing marine fishery-independent monitoring being conducted along the California coast.
- Begin providing some “core” support for Channel Islands National Park’s expanded Kelp Forest Survey.
- Working with Marine Region’s invertebrate management unit, develop by July 2007 (with peer review) approaches for developing capacity goals for spiny lobster, sea urchins, and sea cucumbers; documenting spiny lobster larval distribution and migration dynamics; verification of urchin “barefoot ecologist” size density and distribution surveys; and developing distribution and abundance information for key exploited bivalves and gastropods in fished and un-fished inter-tidal areas.
- Conduct annual Department SCUBA diver certifications and re-certifications, maintain professional memberships in American Academy of Underwater Scientists (AAUS), provide planning and logistical support for Department dive projects in coastal and inland environments for biological surveys and enforcement.

Key Measurable (Planned) Objectives for FY 2007-08:

- During the 2007 field season pilot test monitoring methods and approaches and beginning with the 2008 field season implement the required fishery-independent monitoring for high-priority species identified during the 2006-07 cooperative needs assessment.
- Continue providing some “core” support for Channel Islands National Park’s expanded Kelp Forest Survey on an ongoing basis.